On the Gephyreans of the Mergui Archipelago, collected for the Trustees of the Indian Museum, Calcutta, by Dr. John Anderson, F.R.S., Superintendent of the Museum.

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Genus Phascolosoma (sensu stricto),

Selenka, De Man, and Bülow.

Longitudinal musculature continuous. Numerous finger-shaped tentacles, surrounding the mouth in rings or clusters. A pair of ciliated tubercles over the cerebral ganglion. Intestinal canal consisting of many spiral convolutions, not attached at the hinder extremity. Hooklets present or absent. Two free nephridia. Eggs round. Retractors four, two, or one.

In all seas.

1. Phascolosoma pellucidum, *Kef.*

Phascolosoma pellucidum, *Keferstein, Beiträge zur anatom. und systematischen Kenntniss der Sipunculiden, Zeitschr. f. wiss. Zoologie,* Bd. xv. 1865, p. 433, Taf. xxxii. figs. 26, 27.

Phascolosoma pellucidum, *Selenka, De Man, and Bülow, Die Sipunculiden, eine systematische Monographie, in Semper's Reisen im Archipel der Philippinen,* ii. 4ter Bd. Erste Abtheilung, 1883, pp. 32–34, Taf. iv. figs. 44–49.

Three large specimens, measuring 8–11 centim.

Genus Phymosoma,

Selenka, De Man, and Bülow.

Longitudinal musculature separated into bands. Tentacles numerous, not arranged round the mouth but placed beyond it on the dorsal side in a single series forming three quarters of a circle. Body covered with papillæ. Hooklets generally present on the introvert. Eggs elliptical, flattened. Four retractors. Two eye-spots.

Mostly tropical forms.

2. Phymosoma japonicum, *Grube.*

Phascolosoma japonicum, *Grube,* 54. *Jahresb. der schlesischen Gesellschaft für vaterländische Cultur,* Breslau 1877, p. 73.

Phymosoma japonicum, *Selenka, De Man, and Bülow, Die Sipunculiden, eine systematische Monographie, in Semper's Reisen im Archipel der Philippinen,* ii. 4ter Bd. Erste Abth. 1883, pp. 76–78, Taf. ii. figs. 18–19, Taf. x. figs. 145–146.

Seven specimens, from $4\frac{1}{2}$ to $7\frac{1}{2}$ centim. in length.

Genus Sipunculus.

Longitudinal musculature divided into 17 to 42 bands. Four retractors. Body without papillæ. Tentacles finger-shaped, or a lobed membrane surrounding the mouth. One or several cæca on the rectum. Hooklets wanting. One or two contractile sacs accompany the œsophagus.

Species large. In all seas.

3. Sipunculus robustus, *Keferstein.*

Sipunculus robustus, *Keferstein, Beiträge zur anatom. und system. Kenntniss der Sipunculiden, Zeitschr. f. wiss. Zoologie,* Bd. xv. 1865, p. 421.

Sipunculus robustus, *Selenka, De Man, and Bülow, Die Sipunculiden, eine systematische Monographie, in Semper's Reisen im Archipel der Philippinen,* ii. 4ter Bd. Erste Abth. 1883, pp. 97–99, Taf. xii. fig. 170.

Two specimens, of 17 and 30 centim. in length, and nearly $1\frac{1}{2}$ centim. broad.

4. Sipunculus porrectus, sp. n.

Two yellowish-brown specimens of 28 and 32 centim. in length and $1\frac{1}{2}$ centim. broad.

The internal organs were partially macerated.

On examining the exterior the most obvious peculiarities were the *distinct transverse rings*, whereas the longitudinal furrows are only faintly indicated. Sclerorhynchus about 1 centim. broad and thick; thickly set with papillæ as far as a narrow smooth ring in front. Tentacles very numerous (about 120), about 3–4 millim. long and $\frac{1}{2}$ millim. broad, flattened or fluted. These tentacles are arranged in 2 half-circles on the right and left of the border of the mouth, so that there is a small free space on the dorsal and ventral median lines.

Body musculature strong. The number of longitudinal muscles running from before to behind is 32; anastomoses rarely and feebly occur.

Four retractors of the introvert are of the usual length; the two ventral retractors a few millimetres shorter than the dorsal. Each retractor rises from 3, 4, or 5 longitudinal muscles. The retractors are free for their whole length, and coalesce just before their insertion into the introvert. From 20–25 longitudinal muscles are found in the greater portion of the anterior half of the body, and freely traverse its cavity. Their thickness corresponds to that of the longitudinal muscles of the body, or perhaps less; some are as slender as threads. These free "accessory muscles" apparently originate from the longitudinal

muscles of the body by subdivision, for each is inserted in front to the same body-muscle as that from which it originates further back. There is no regularity of arrangement in these accessory muscles; in some their hinder insertion extends back to the hinder third of the body; in others, only just beyond the insertion of the retractors of the introvert; but the majority originate just before, or beyond, the middle of the body. Their insertion is equally variable, as 3 or 4 are inserted at the base of the retractors, and perhaps a single one about the middle of the retractor, while others extend to the body-wall from 5–8 centim. beyond the sclerorhynchus; but one or two extend as far forward as the sclerorhynchus. In general the dorsal accessory muscles have a greater length, and extend further back than the ventral muscles. Sometimes two adjacent longitudinal muscles each throw off one accessory muscle; then follow several undivided longitudinal muscles in succession. The tendency to such subdivision of the longitudinal body-muscles, however, exhibits itself at several other points, as, for instance, when an accessory muscle rises from the longitudinal muscle only to reunite with it one or a few centims. further on.

Only a portion of the intestinal canal was in good preservation—the œsophagus, the spiral at the end of the body, and the rectum. Two contractile sacs were visible on the œsophagus, without constrictions; the intestinal coil was *not fixed* at the hinder end of the body, but free, and consisted here of a double spiral, the convolutions of which were fixed further forward by many delicate fibres to the body-wall. The rectum was attached to the inner body-wall by a mesentery for a length of 5 centim.; the anus is placed unusually far forward, being only 5 millim. beyond the sclerorhynchus. Where the rectum separates from the body-wall and the intestinal coil passes into it, the slightly developed spindle-muscle also arises.

I can give no positive information respecting the nephridia, as they were macerated. In one of the two specimens I thought I recognized two fragments of nephridia; their external openings appeared to lie a little in front of the four retractors of the introvert; but I am not positive on this point.

Among the other Gephyrea sent to me for examination I found a specimen of a *Bonellia*; but unfortunately so imperfect that I was not in a position to determine the species.